## Amendments to Drawings:

The attached sheets of drawings include changes to Figures 1 through 3. These replacement sheets replace the original drawing sheets filed with the present application on June 27, 2003. In Figures 1 and 2, the legend "Prior Art" has been added to show that which is illustrated is old. In Figure 3, reference numeral 35 has been added and the term "WTRU" has been added to elements 33 and 39 to conform the drawings to the specification.

## REMARKS/ARGUMENTS

Pursuant to the foregoing amendment, claims 1-21 are currently pending in this application. Claims 1, 4, 7, and 13-16 have been amended, and claims 17-21 have been added, to more distinctly claim subject matter that the applicants regard as the invention. In the drawings, Figures 1 through 3 have been amended to identify what is prior art and to conform the drawings to the specification. Applicants submit that no new matter has been introduced into the application by these amendments.

### *Allowable Subject Matter*

The Examiner is thanked for indicating that claims 7 through 13 contain allowable subject matter.

### *Objections to the Drawings*

The Examiner objected to the drawings stating that Figures 1 and 2 should be designated by a legend such as Prior Art because only that whish is old is illustrated. A replacement sheet containing Figures 1 and 2 with the suggested Prior Art legend is submitted herewith. Withdrawal of the objection to the drawings is respectfully requested.

### *Claim Rejections - 35 USC § 103*

Claims 1-6, and 14-15 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Publication No. 2002/0122406 to Chillariga (hereafter Chillariga) in view of U.S. Patent No. 6,868,277 to Cerwall et al. (hereafter Cerwall) and U.S. Publication No. 2002/0131483 to Papasakellariou (hereafter Papasakellariou). The applicants respectfully disagree.

The present invention is a method, as in claim 1, and system, as in claims 15 and 16, for minimizing interference of transmissions in a wireless communication system employing a time slot structure which is operating in the physical and spectral vicinity of other systems that employ continuous transmission. For example, the wireless communication system could be a 3G system employing both time division duplex (TDD) and frequency division duplex (FDD) modes. The method first measures interference of a transmission in all time slots. Next, the method determines a variance of the measured interference between the time slots, to determine whether the interference is attributable to discontinuous transmission (i.e. TDD transmission) or continuous transmission (i.e. FDD transmissions). If the variance of the interference measurements between time slots is above a predetermined value, indicating the interference is from discontinuous transmissions, the method employs a TDD escape mechanism to minimize the interference. The TDD escape mechanism may be, for example, slot reallocation, dynamic channel allocation, dynamic channel selection. If the variance of the interference measurements between time slots is below a predetermined value, indicating the interference is from continuous transmissions, the method employs a handover escape mechanism. The handover escape mechanism may, for example, handover a time division duplex (TDD) wireless transmit/receive unit (WTRU) to a different carrier frequency in TDD, using an inter-frequency handover, or where the mobile is capable of multiple modes, the WTRU may handover to another mode.

In this manner, the claimed method minimizes interference based on the kind of transmissions (i.e., continuous or discontinuous) causing the interference in a wireless communication system employing both continuous and discontinuous transmissions, for example, FDD and TDD transmissions, respectively.

In contrast, Chillariga discloses a communication system having a fast macrodiversity switching environment. The disclosed communication system is a time divided system where transmissions occur in bursts in time slots. A zone manager is disclosed that manages the allocation of time slots so that burst overlap and interference caused by such overlap is minimized. Chillariga does teach the use of a predetermined value for decision making, but in the context of determining burst overlap into neighboring time slots, not for determining whether interference is sufficient for implementing interference escape mechanisms, nor for determining which type of escape mechanism to implement depending on the type of interference, i.e. continuous or discontinuous.

Cerwall discloses a method for allocating radio channels in a wireless communication system where the radio quality on candidate channels is measured and the interference effects of establishing a radio connection on the candidate channels on already existing radio connections is estimated. The Examiner opines that Cerwall teaches employing a TDD escape mechanism, stating that "The applicant's specification states that "escape" can be channel allocation." (See Office Action, page 6.) While Cerwall teaches channel allocation, it is in the context of initial channel allocation, when a WTRU comes online. Cerwall does not teach channel allocation, or any other means, for escaping discontinuous (i.e. TDD) interference, as is claimed in the present invention. It is noted that channel allocation is one example of a TDD escape mechanism for escaping from discontinuous interference.

Papasakellariou discloses a method for dynamically adjusting the spreading factor in a code division multiple access (CDMA) wireless communication system on a frame-by-frame basis to reflect a change in the data rate for each corresponding frame. The Examiner cites Papasakellariou as disclosing the use of variance

- 14 -

calculations for interference (see Office Action, page 4). However, the presently amended claims do not utilize variance for calculating an optimal spreading factor, but rather a variance between the interference measurements taken at various time slots is calculated to determine the discontinuous or continuous nature of the interference. <u>Papasakellariou does not teach using a calculated variance measured interference between time slots to determine whether the interference is continuous or discontinuous.</u>

Neither Chillariga, Cerwall, nor Papasakellariou, alone or in combination, disclose a <u>method for minimizing interference in a wireless communication system employing both TDD and FDD modes,</u> as is presently claimed.

Neither Chillariga, Cerwall, nor Papasakellariou, alone or in combination, disclose a method where <u>interference is measured in at least two time slots, and a variance of the measured interference is calculated to determine whether the interference is continuous or discontinuous,</u> as is presently claimed.

Neither Chillariga, Cerwall, nor Papasakellariou, alone or in combination, disclose a method for <u>employing TDD escape mechanisms where the interference is determined to be discontinuous.</u>

Neither Chillariga, Cerwall, nor Papasakellariou, alone or in combination, disclose a method for <u>employing a handover escape mechanism where the interference is determined to be continuous.</u>

For the reasons presented above, presently amended claim 1 is submitted to be patentable over Chillariga in view of Cerwall and Papasakellariou. Withdrawal of the 35 U.S.C. § 103 rejection is therefore respectfully requested.

With respect to claims 2-3, these claims depend from claim 1. Accordingly, for the reasons presented above withdrawal of the 35 U.S.C. § 103 rejection is respectfully requested.

Independent claim 4, and claims 5-6 which depend there from, and independent claims 15, are also submitted to be patentable over Chillariga in view of Cerwall and Papasakellariou for the reasons presented above. Accordingly, withdrawal of the 35 U.S.C. § 103 rejection is respectfully requested.

Claim 14 has been amended to depend from allowed claim 7. Therefore, withdrawal of the 35 U.S.C. § 103(a) rejection is respectfully requested.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chillariga in view of Cerwall and Papasakellariou and further in view of U.S. Patent No. 5,666,651 to Wang (hereafter Wang). For the reasons presented above, applicants respectfully request withdrawal of this 35 U.S.C. § 103(a) rejection.

## *Conclusion*

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1-21, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

Zeira et al.

By _____

Robert D. Leonard
Registration No. 57,204

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103
Telephone: (215) 568-6400
Facsimile: (215) 568-6499

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